

**ERRATA SHEET FOR FIRST PRINTING
ANSI/ASHRAE STANDARD 62.1-2007
Ventilation for Acceptable Indoor Air Quality**

January 29, 2008

The corrections listed in this errata sheet apply to the first printing of ANSI/ASHRAE Standard 62.1-2007 identified on the outside back cover as "86155 PC 5/07".

NOTICE: ASHRAE now has a list server for Standing Standards Project Committee 62.1 (SSPC 62.1). Interested parties can now subscribe and unsubscribe to the list server and be automatically notified via e-mail when activities and information related to the Standard is available. To sign up for the list server please visit **Standards List Servers** on the Standards and Codes section of the ASHRAE website at <http://www.ashrae.org/publications/detail/15620>.

Page Erratum

- 12 **Section 6.2.6.2 Short-Term Conditions.** Equation 6-9a shall be identified as the IP version and Equation 6-9b as the SI version. These are the same equation in different units.

$$T = 3v / V_{bz} \quad (6-9a) \text{ IP}$$

$$T = 50v / V_{bz} \quad (6-9b) \text{ SI}$$

**INTERPRETATION IC 62.1-2007-2 OF
ANSI/ASHRAE STANDARD 62.1-2007
VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY**

Approved 1/20/2008

Request from: Jeremy Fauber (jpfauber@heapy.com), Heapy Engineering, LLC, 1400 West Dorothy Lane, Dayton, OH 45409.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 62.1-2007, Section 6.2.2 and Table 6-2, regarding zone air distribution effectiveness (E_z) values.

Background: Heat pumps are typically sized for meeting the cooling load and thus typically oversized for meeting the heating load. On a heating design day while operating in the heating mode the heat pump will deliver air more than 15°F above room temperature a fraction of the hour, and room temperature the remainder of the hour. The air delivery temperature averages much lower than the heating leaving air temperature of the heat pump and the average is less than 15°F above room temperature.

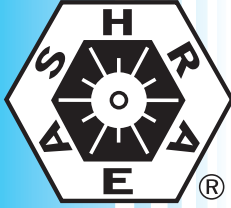
Interpretation: For a ceiling supply of warm air an E_z value of 1.0 can be used when the average air temperature delivered to a space during heating is less than 15°F above room temperature.

Question: Is this interpretation correct?

Answer: No

Comments: Section 6.2.2 does not allow averaging supply air temperature to determine a value of E_z .

ANSI/ASHRAE Standard 62.1-2007
(Supersedes ANSI/ASHRAE Standard 62.1-2004)
Includes ANSI/ASHRAE Addenda listed in Appendix I



ASHRAE STANDARD

Ventilation for Acceptable Indoor Air Quality

See Appendix I for approval dates by the ASHRAE Standards Committee, the ASHRAE Board of Directors, and the American National Standards Institute.

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CONTENTS

ANSI/ASHRAE Standard 62.1-2007, Ventilation for Acceptable Indoor Air Quality

SECTION	PAGE
Foreword.....	2
1 Purpose	2
2 Scope	3
3 Definitions.....	3
4 Outdoor Air Quality	5
5 Systems and Equipment.....	5
6 Procedures	11
7 Construction and System Start-Up.....	17
8 Operations and Maintenance	18
9 References	20
Normative Appendix A: Multiple-Zone Systems	20
Informative Appendix B: Summary of Selected Air Quality Guidelines	23
Informative Appendix C: Rationale for Minimum Physiological Requirements for Respiration Air Based on CO ₂ Concentration	31
Informative Appendix D: Acceptable Mass Balance Equations for Use with the IAQ Procedure	33
Normative Appendix E: Ventilation Rates for Health Care Facilities	34
Informative Appendix F: Separation of Exhaust Outlets and Outdoor Air Intakes	35
Informative Appendix G: Application and Compliance.....	36
Informative Appendix H: Documentation	38
Informative Appendix I: Addenda Description Information.....	41

NOTE

When addenda, interpretations, or errata to this standard have been approved, they can be downloaded free of charge from the ASHRAE Web site at <http://www.ashrae.org>.

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FOREWORD

ANSI/ASHRAE Standard 62.1-2007 is the latest edition of Standard 62. The 2007 edition combines Standard 62.1-2004 and the eight approved and published addenda to the 2004 edition, thereby providing an easy-to-use consolidated standard. Specific information on the content of each addendum and approval dates for each addendum are included in Informative Appendix I at the end of this standard.

First published in 1973, Standard 62.1 is now updated on a regular basis using ASHRAE's continuous maintenance procedures. According to these procedures, Standard 62.1 is continuously revised by addenda that are publicly reviewed, approved by ASHRAE and ANSI, and published in a supplement approximately 18 months after each new edition of the standard, or in a new, complete edition of the standard, published every three years.

Standard 62.1 has undergone some key changes over the years, reflecting the ever-expanding body of knowledge, experience, and research related to ventilation and air quality. While the purpose of the standard has remained consistent—to specify minimum ventilation rates and other measures intended to provide indoor air quality that is acceptable to human occupants and that minimizes adverse health effects—the means of achieving this goal have evolved. In its first edition the standard adopted a prescriptive approach to ventilation by specifying both minimum and recommended outdoor airflow rates to obtain acceptable indoor air quality for a variety of indoor spaces. In its 1981 edition, the standard reduced minimum outdoor airflow rates and introduced an alternative performance-based approach, the Indoor Air Quality (IAQ) Procedure, which allowed for the calculation of the amount of outdoor air necessary to maintain the levels of indoor air contaminants below recommended limits. Today the standard still retains the two procedures for ventilation design, the IAQ Procedure and the Ventilation Rate Procedure.

In its 1989 edition, and in response to a growing number of buildings with apparent indoor air quality problems, the standard increased minimum outdoor airflow rates significantly and introduced a requirement for finding outdoor air intake flow requirements for multiple-zone, recirculating systems. The 1999 and 2001 editions made several minor changes and clarifications that did not impact the minimum required outdoor airflow rates. In its 2004 edition—the last time the standard was published in its entirety—the standard modified the IAQ Procedure to improve enforceability, but more significantly, it modified the Ventilation Rate Procedure, changing both the minimum outdoor airflow rates and the procedures for calculating both zone-level and system-level outdoor airflow rates.

The 2007 edition of the standard updates, revises and improves it in several ways, without changing minimum outdoor airflow rates. The standard:

- *Clarifies dehumidification analysis requirements in Section 5.10, and offers exceptions to the 65% RH limit requirement and to the net-positive intake-airflow requirement (Addendum 62.1a).*
- *Corrects occupant category inconsistencies among Tables 5-2, 6-1, and 6-4, and provides additional information for several occupancy categories (Addendum 62.1b).*
- *Updates references and clarifies the text in Informative Appendix B, particularly as related to subjective evaluation of air quality (Addendum 62.1c).*
- *Updates the information presented in Table 4-1, to be consistent with the U.S. EPA National Ambient Air Quality Standards (NAAQS) as published at the time the addendum was approved, adding PM 2.5 as a criteria pollutant and adding the eight-hour standard for ozone (Addendum 62.1d).*
- *Includes a new informative appendix, Appendix H, which summarizes the documentation requirements in the body of the standard thus providing a single point of reference for users (Addendum 62.1e).*
- *Updates the purpose and scope of the standard to make them consistent with changes that have already been incorporated into the body of the standard. Specifically, it: excludes single-family houses and multiple-family structures of three or fewer stories from the scope, removes specific minimum outdoor airflow rates for areas that contain smoking or environmental tobacco smoke (ETS), and excludes thermal comfort requirements (Addendum 62.1f).*
- *Requires proper design for buildings that contain both ETS and ETS-free areas, by requiring (briefly): classification of areas based on expected presence of ETS, pressurization of ETS-free areas, separation of ETS and ETS-free areas, and cautionary signage for ETS-areas (Addendum 62.1g).*
- *Adds requirements for residential spaces in buildings with more than three stories to Table 6-1, and deletes Tables E-2 and E-3 from Appendix E, which provided ventilation requirements for residences and vehicles (Addendum 62.1h).*

For more specific information on these changes and on other revisions made to the standard by other addenda, refer to Informative Appendix I at the end of this standard. Users of the standard are encouraged to use the continuous maintenance procedure to suggest changes for further improvements. A form for submitting change proposals is included in the back of this edition. The project committee for Standard 62.1 will take formal action on all change proposals received.

1. PURPOSE

1.1 The purpose of this standard is to specify minimum ventilation rates and other measures intended to provide indoor

air quality that is acceptable to human occupants and that minimizes adverse health effects.

1.2 This standard is intended for regulatory application to new buildings, additions to existing buildings, and those changes to existing buildings that are identified in the body of the standard.

1.3 This standard is intended to be used to guide the improvement of indoor air quality in existing buildings.

2. SCOPE

2.1 This standard applies to all spaces intended for human occupancy except those within single-family houses, multi-family structures of three stories or fewer above grade, vehicles, and aircraft.

2.2 This standard defines requirements for ventilation and air-cleaning system design, installation, commissioning, and operation and maintenance.

2.3 Additional requirements for laboratory, industrial, health care, and other spaces may be dictated by workplace and other standards, as well as by the processes occurring within the space.

2.4 Although the standard may be applied to both new and existing buildings, the provisions of this standard are not intended to be applied retroactively when the standard is used as a mandatory regulation or code.

2.5 This standard does not prescribe specific ventilation rate requirements for spaces that contain smoking or that do not meet the requirements in the standard for separation from spaces that contain smoking.

2.6 Ventilation requirements of this standard are based on chemical, physical, and biological contaminants that can affect air quality.

2.7 Consideration or control of thermal comfort is not included.

2.8 This standard contains requirements, in addition to ventilation, related to certain sources, including outdoor air, construction processes, moisture, and biological growth.

2.9 Acceptable indoor air quality may not be achieved in all buildings meeting the requirements of this standard for one or more of the following reasons:

- because of the diversity of sources and contaminants in indoor air;
- because of the many other factors that may affect occupant perception and acceptance of indoor air quality, such as air temperature, humidity, noise, lighting, and psychological stress;
- because of the range of susceptibility in the population; and
- because outdoor air brought into the building may be unacceptable or may not be adequately cleaned.

3. DEFINITIONS (SEE FIGURE 3.1)

acceptable indoor air quality: air in which there are no known contaminants at harmful concentrations as determined by cognizant authorities and with which a substantial majority (80% or more) of the people exposed do not express dissatisfaction.

air-cleaning system: a device or combination of devices applied to reduce the concentration of airborne contaminants, such as microorganisms, dusts, fumes, respirable particles, other particulate matter, gases, and/or vapors in air.

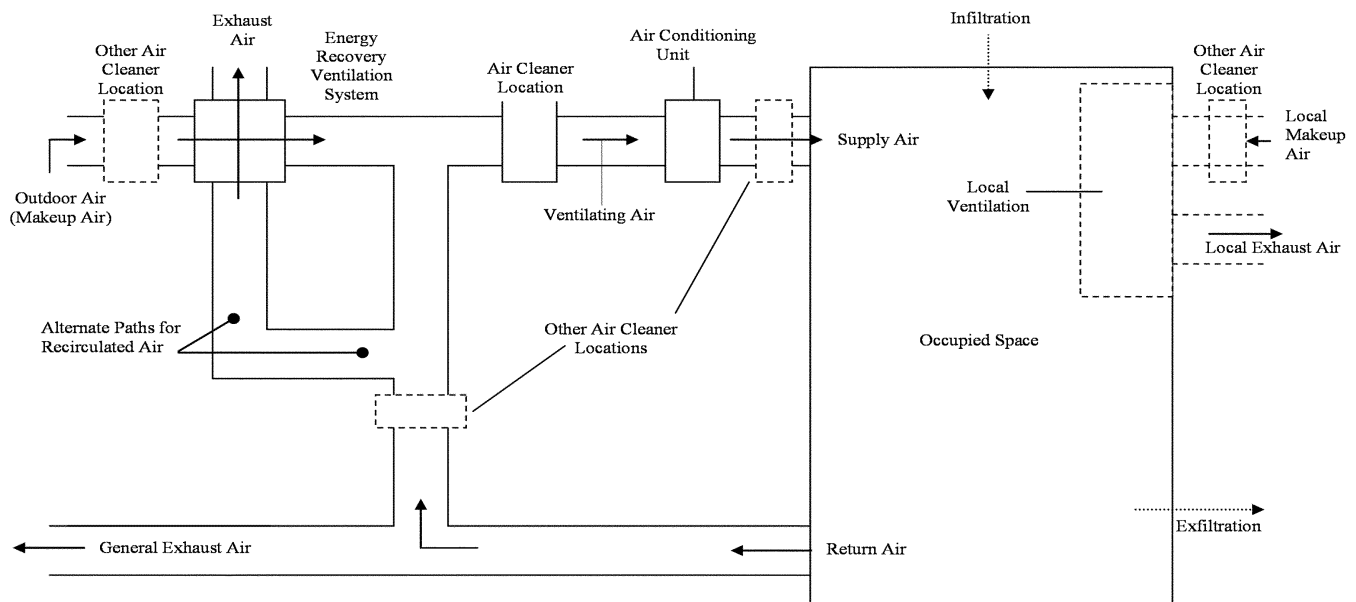


Figure 3.1 Ventilation system.